

CLAIMS

1. A catalyst comprising:

- 0.1-99.7% by weight of at least one alumina matrix;
- 0.1-80% by weight of at least one globally non dealuminated Y zeolite with a lattice parameter of more than 2.438 nm, a global $\text{SiO}_2/\text{Al}_2\text{O}_3$ mole ratio of less than 8, and a framework $\text{SiO}_2/\text{Al}_2\text{O}_3$ mole ratio of less than 21 and more than the global $\text{SiO}_2/\text{Al}_2\text{O}_3$ mole ratio;
- 0.1-30% by weight of at least one group VIII metal and/or 1-40% by weight of at least one group VIB metal (% oxide);
- 0.1-20% by weight of at least one promoter element selected from the group formed by boron and silicon (% oxide);
- 0-20% by weight of at least one group VIIA element;
- 0-20% by weight of phosphorous (% oxide);
- 0.1-20% by weight of at least one group VIIB element.

15 2. A catalyst according to claim 1, in which the group VIIA element is fluorine.

3. A catalyst according to any one of the preceding claims, in which the group VIIB element is manganese.

20 4. A hydrocracking process using a catalyst according to any one of the preceding claims, carried out at a pressure of at least 2 MPa, a temperature of at least 230°C, using a quantity of hydrogen of at least 100 Nl hydrogen/l of feed and with an hourly space velocity of 0.1-10 h^{-1} .

25 5. A process according to claim 4, in which the pressure is 2-12 MPa, the temperature is 300-480°C and the conversion is less than 55%.

6. A process according to claim 5, in which the pressure is 7.5-11 MPa.

7. A process according to claim 4, in which the pressure is at least 8.5 MPa, the temperature is 300-430°C and the conversion is at least 55%.
8. A process according to claim 5, in which the feed is hydrotreated prior to hydrocracking.
9. A process according to claim 8, in which the hydrotreatment catalyst contains at least one group VIII metal, at least one group VIB metal, phosphorous and optionally boron.
10. A process according to claim 5, in which the pressure is 8-11 MPa.